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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/765,105 | 01/28/2004 | Masahiko Watanabe | 023484-0155 | 9730 |

22428 7590 10/31/2006

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| EXAMINER |
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ESHETE, ZELALEM

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| ART UNIT | PAPER NUMBER |
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3748

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/765,105 | WATANABE, MASAHIKO | |
| | Examiner | Art Unit | |
| | Zelalem Eshete | 3748 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-18 and 20 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 19 is/are rejected.
- 7) ☒ Claim(s) 3-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the amendment filed on 09/11/2006.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,19 are rejected under 35 U.S.C. 102(b) as being anticipated by Suga (5,203,291).

Regarding claim 1: Suga discloses a valve timing control device for an internal combustion engine (see figures 6,7) comprising: a driving rotational member driven by a crankshaft of the engine (see numeral 104); a driven rotational member including either one of a camshaft having a cam that opens an engine valve (see numeral 100), provided at an associated one of an intake port and an engine valve, provided at an associated one of an intake port and an exhaust port for opening and closing the associated port against a spring bias of a valve spring, which biases the engine valve in a direction for closing of the associated port (see column 1, lines 5 to 15; column 15, lines 45 to 48), and a separate member integrally connected to and separable from the camshaft (see numerals 114,122); and an installation angle adjusting device disposed

between the driving rotational and the driven rotational member to transmit a torque of the driving rotational member to the driven rotational member (see numeral 136), the installation-angle adjusting device comprising a movable operating member than varies a relative rotation phase between the crankshaft and the camshaft by way of movement of the movable operating member in a substantially radial direction of the camshaft by an electromagnetic force depending on engine operating condition; in that, Suga discloses a control strategy in response to electromagnetic force by electromagnetic valve in opening and closing the valve (see figures 1,6,7; column 5, lines 30 to 45).

Regarding claim 2: Suga discloses the installation angle adjusting mechanism transmits the torque of the driving rotational member to the driven rotational member by converting a rotational movement produced depending on the engine operating conditions into a radial displacement and further converting the radial displacement into another rotational movement (see figure 7).

Regarding claim 19: Suga discloses the claimed invention as recited above; and further discloses the installation angle adjusting device comprising a guide and a movable operating member (see numeral 122, 136), the guide being provided at either one of the driving rotational member and the driven rotational member for guiding the movable operating member (see figures 6,7), and the movable operating member varying a relative rotation phase between the crankshaft and the camshaft by way of movement of the movable operating member in a direction along the guide by an

electromagnetic force depending on engine operating conditions ; in that, Suga discloses a control strategy in response to electromagnetic force by electromagnetic valve in opening and closing the valve (see figures 1,6,7; column 5, lines 30 to 45).

Allowable Subject Matter

3. Claims 3-8, objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Claims 9-18,20 are allowed.
5. The following is an examiner's statement of reasons for allowance: Regarding independent claims 9,20: The claimed combinations including the limitation directed to spiral guide, its arrangement; and the function thereof are not shown or rendered obvious in the prior art.
6. Regarding independent claim 18: The claimed combinations including the limitation directed to converting a rotational movement produced by an electromagnetic force has not been shown or rendered obvious in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

7. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (571) 272-4860. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zelalem Eshete
Examiner
Art Unit 3748

